2002
drinking water quality report

Department of Public Utilities
County of Los Alamos
New Mexico

The Department of Public Utilities for Los Alamos County is once again proud to present our annual water quality report. We have dedicated ourselves to producing drinking water that meets or is better than all state and federal drinking water standards. We incurred no violations in 2002.

You will find included in this report the source of our drinking water, the results of water quality tests in 2002, and activities that are being implemented to improve our water distribution system, and investigate future sources of water.

For more information on this report, or questions relating to your drinking water, please call us at (505) 662-8130.

The Source Of Our Drinking Water

The Los Alamos County drinking water system is supplied by groundwater pumped from 12 wells, which tap the main aquifer under the Pajarito Plateau, part of the Santa Fe Formation. The Los Alamos County system has wellhead protection in place and treats the water with a disinfectant. Sources for communities' drinking water (both tap and bottled water) can include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from the presence of animals or from human activity.

The State of New Mexico is working on an assessment of our source water. It is scheduled to be completed in 2003.

You're Invited . . .

The Los Alamos County Utilities Board encourages public interest and participation in decisions affecting drinking water. Regular Board meetings are held on the third Wednesday of each month at 5:30 p.m. in the downstairs conference room of the County's Annex Building, located at 901 Trinity Drive, Los Alamos. The public is always welcome.

For People With Special Conditions

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/CDC (Center for Disease Control and Prevention) guidelines on appropriate means to lessen infection risk by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline: (800-426-4791).

EPA and AWWA Hotline Numbers

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline: (800-426-4791) or visiting them on the internet at http://www.epa.gov/safewater/.

Consumer Confidence Report: 2002 Drinking Water Quality Data

Detected Compounds	Units	SDWA MCL	SDWA MCLG	Range of Values Detected	System Average	Violation	Major Sources
Inorganic Compounds							
Arsenic	ppb	50	n/a	1.1 - 7.6	3.4	NO	Natural deposits
Chromium	ppb	100	100	2.9 - 4.5	3.9	NO	Natural deposits
Fluoride	ppm	4	4	0.29 - 1.0	0.59	NO	Natural deposits, fluoridation by County
Nitrate & Nitrite	ppm	10	10	0.32 - 0.50	0.41	NO	Leaching septic tanks, sewage; natural deposits
Lead (residential taps)	ppb	15[1]	0	< 5.0 - 12.0	over 90% < detect limit of 5 ppb	NO	Corrosion of household plumbing
Copper (residential taps)	ppm	1.3[1]	1.3	< 0.50 - 0.12	over 90%< detect limit of 0.09 ppm	NO	Corrosion of household plumbing
Hardness (as $CaCO_3$)	grains/gal	-	-	1.57 - 5.59	3.4	NO	Natural deposits
Organic Compounds							
Total Trihalomethanes (TTHMs)[2]	ppb	100	0	< 0.50 - 15.9	4.92	NO	By-product of drinking water chlorination
Radionuclides							
Alpha emitters	pCi/L	15	0	0.00 - 1.2	0.6	NO	Decay of natural deposits
Beta/photon emitters	pCi/L	50	0	2.2 - 4.3	2.8	NO	Decay of natural, man-made deposits
Microbiology							
Total Coliform[3]	cfu per 100 mL	5%	0	Monthly Samples max.positive: 0 of 48 (0%) min. positive: 0 of 45 (0%)	Total positive samples in 2002: 0 of 556	NO	Regrowth of soil bacteria in the distribution system piping

Notes:
[1]The Action Level (AL) for lead/copper is exceeded if 90% of homes tested have lead levels above 15 ppb & copper levels above 1.3 ppm. No lead/copper samples in 2002 exeeded the AL.
[2]TTHM compliance is based on a running annual average. TTHM concentrations vary seasonally in our water.
[3]The MCL for total coliforms is the presence of coliform bacteria in 5% or more of the monthly samples.

Key to Table
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
pCi/L= picocuries per liter (a measure of radioactivity)
ppm = parts per million, or milligrams per liter
ppb = parts per billion, or micrograms per liter
cfu = colony forming units

How to Read the Table -- Our water is tested to assure that it is safe. The results of tests performed in 2002, presented in the above table, show that our water is of excellent quality. The following is an explanation of the columns:

- ***SDWA MCLG*** is the Maximum Contaminant Level Goal (MCLG). This is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG allows for a margin of safety.
- ***SDWA MCL*** is the Maximum Contaminant Level (MCL). This is the highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- ***Range of Values Detected*** shows the minimum to maximum results observed in our water in 2002.
- ***Major Sources*** provides an explanation of typical or man-made origins of contaminant.

Special Water Quality Monitoring

In coordination with Los Alamos National Laboratory environmental surveillance activities, Los Alamos drinking water supply wells are routinely monitored for Perchlorate, Strontium 90, Tritium and High Explosive compounds. After a reported spill of diesel fuel at TA-21, monitoring for diesel range organics was added during 2002. These tests are in addition to the normal series of tests required for compliance with the Safe Drinking Water Act. During 2002, none of these compounds was detected at or near levels of public health concern.

Perchlorate

Ammonium perchlorate is the main ingredient in solid propellant for rockets, missiles, and fireworks and is used in various products such as air bag inflators, dyes, and paints. Health effects observed from perchlorate are disruption of thyroid hormone production, with pregnant women and their developing fetuses most at risk. Investigations by the EPA into the health effects of perchlorate in drinking water are on-going. While no maximum contaminant level has been proposed or adopted as of yet, states such as California and Texas have adopted Action Levels of 4 ppb.

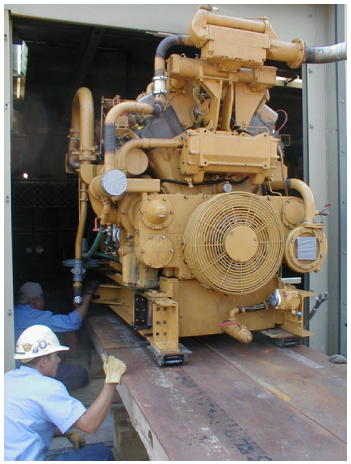
Los Alamos County began monitoring for perchlorate in 1997. Perchlorate has been detected in well Otowi-1 with concentrations ranging from 2.0 ppb to 4.0 ppb. This well is primarily utilized for non-potable uses. In addition, using a new experimental low-level technique, trace amounts of perchlorate (reported concentration of 0.24 ppb) were detected in a 2002 drinking water sample.

Cryptosporidium

Cryptosporidium, found in rivers and streams, is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. Los Alamos water comes from wells, not rivers, and, as expected, cryptosporidium has not been detected in our water supply.

Radon

Radon is a naturally-occurring radioactive element, whose decay products have been linked to cancer in humans. EPA is currently considering regulation of radon in drinking water, but no MCL has been established. Radon 222 in Los Alamos water supply wells in 2000 showed a level of 235 to 685 pCi/L, with an average of 408 pCi/L.



Intallation of Engine at Pajarito Mesa Well No. 4

2002 ACTIVITIES

Engine Overhaul at PM Well

Unique among water production facilities, a natural gas-powered engine rather than the usual electric motor, drives the pump at Pajarito Mesa Well (PM Well) Number 4.

In the spring of 2002, the Utilities Department over-hauled the 20 year-old, 15,000 pound engine *(photo to the left)*. The job required removing the engine from the well house, then transporting it to Albuquerque for a total rebuild. Reinstalling the engine took five men approximately four hours to carefully reposition the engine and secure it to its supporting base. The engine is now ready for another long, productive run.

Guaje MCC Replacement

The Guaje well field was first put into service in the early 1950s. While the original wells have since been replaced with new ones, the booster pump stations that lift the water from the well field up into Los Alamos still have much of their original equipment. The aging electrical motor control centers (MCCs) had reached the point where failures were becoming frequent, and replacement parts were no longer available. ASCG Engineering, Inc. was retained to provide design services for replacement MCCs, and Gamblin-Rogers Construction Company was the successful bidder for the construction. Work is now complete on the replacement equipment, greatly increasing the reliability of this critical element of the water supply system.

San Juan Chama Water Study

A portion of New Mexico's share of the Colorado river is delivered to users along the Rio Grande by the San Juan/Chama (SJ/C) diversion project. Los Alamos County has a contract with the Bureau of Reclamation for annual delivery of 1200 acre-ft of San Juan/Chama project water. However, before the County can use the water, it must be lifted from the Rio Grande up onto the mesa that overlooks White Rock Canyon.

Test drilling in White Rock Canyon

In early 2002, the Utilities Department contracted with Boyle Engineering Corporation to study the feasibility of using San Juan/Chama project water. An initial geophysical study was conducted in the spring of 2002, with field drilling work in the fall *(photo above)*. Initial results from the field investigation look promising, and the final feasibility report is due from the Consultant in the summer of 2003. Use of San Juan/Chama water is key to the County's long-term strategy of conserving our groundwater.

Department of Public Utilities
Los Alamos County
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As mandated by the Safe Drinking Water Act (SDWA),
this Consumer Confidence Report details our water sources, the results of our water tests, and other information.

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

CERRO GRANDE FIRE RECOVERY

The Cerro Grande fire of May 2000 devastated much of Los Alamos County's infrastructure, and the water system was no exception. The County received compensation under the authority of the Cerro Grande Fire Assistance Act to construct a 7.75 million gallon water tank in the North Community and construct some water distribution system improvements. It is expected that aging cast iron waterlines in the burned areas will be severely damaged as a result of road reconstruction. Therefore, these lines will be replaced as part of the Burned Area Reconstruction and Utilities Upgrade project, slated to begin in 2003. In 2002, the water tank and distribution system improvement projects were begun.

Excavation For New Water Tank

Excavation activities began in preparing the site for the new 7.75 million gallon water tank. *(Photo top left.)* The new tank is scheduled to be operational before onset of the 2003 fire season. During the Cerro Grande fire the existing storage volume of under 1 million gallons was quickly exhausted, greatly hampering fire-fighting capabilities. The new tank will provide a secure, gravity-fed fire fighting water supply at a volume eight times that available during the Cerro Grande fire.

Utilities Manager, Chris Ortega, inspects the new tank site.

16-inch waterline being installed on Diamond Drive.

Diamond Drive 16-inch Waterline

After the Pueblo Canyon floods of 2001, the Utilities Department took steps to secure the vulnerable water line linking North Community to the rest of Los Alamos. A 16-inch diameter water line was installed along Diamond Dr. across the Pueblo Canyon fill bridge. *(Photo bottom left.)* This line links terminal storage facilities near Urban Park with those at the west end of Trinity Dr., allowing back-feed between the two systems for a more reliable supply.